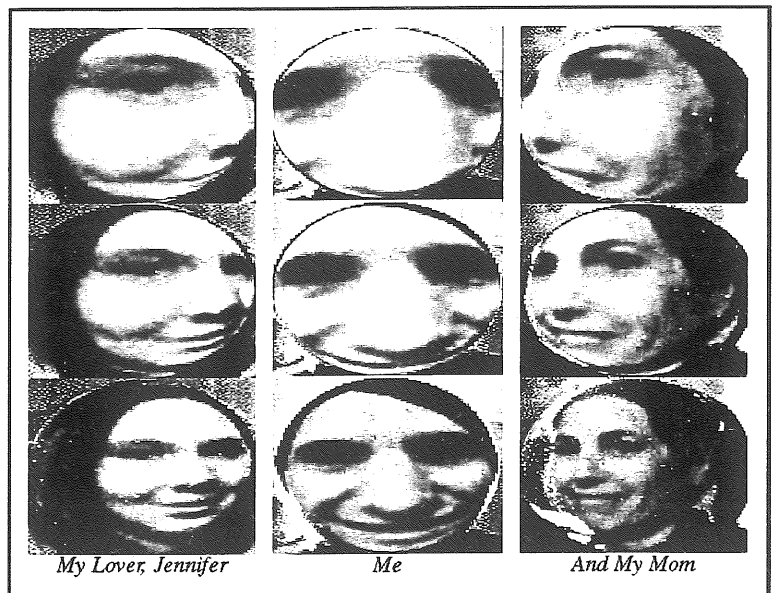Artists Using Science and Technology newsletter

Anna Ursyn
aursyn@GoldnG8.
UnivNorthCo.edu

1 How thecom-
puter can
enhance the
quality of stu-
dent art?

2 Themes and assign-
ments you use in
your teaching com-
puter graphics?

3 How do you share your
own inspirations with
your students?

①

This issue of rlem is all about the teaching and learning computer art graphics. The important purpose of instruction in computer art graphics is to develop students' working habits on the computer in order to stimulate their artistic growth and production. I decided to invite people to contribute to this issue and ask them to share their thoughts and experiences in the area of teaching computer graphics. I asked questions:

My Lover, Jennifer   *Me*   *And My Mom*

by Anne Ursyn's student Ian Mcgill

4 How do you moti-
vate your students
to do quality work?

5 What tools in the field of
computer graphics you
consider most inspiring the
student art?

cover art by Jackie White

COMPUTERS, ART AND COMMUNITY

Wednesday, March 13, 7:30 pm
McBean Theatre, Exploratorium
3601 Lyon St.
San Francisco, CA

"NEW MEDIA IN THE MUSEUM SETTING"

A discussion between **Steve Seid** and **Jim Newman** about the Internet and how it creates a changing relationships with Art Museums. Can an artwork really be at the Whitney Museum, if people can be viewing it from almost anyplace in the world? How do museums follow artists out into the world wide web? Is the white cube gaining a new virtuality? And what of museum goers? Will cultural exposure become a solitary exercise? Or will the internet expand the role of art in society?
A number of more interesting artist-created websites will be demonstrated after the discussion.

Steve Seid is Video Curator at the University Art Museum/Pacific Film Archive where he has exhibited literally hundreds of experimental media works. He has written extensively on video, as well as new media. Seid has also designed a total of two pages for the web.

Jim Newman is founder and owner of Dilexi Gallery 1958-1970 President of Other Minds, a new music presenting organization, 1992-present. Creator and designer of web sites, including _Hollywood Archaeology (with Lowell Darling), http://www.echonyc.com/hwdarch (1995), and Other Minds(with Carl Stone), http://www.otherminds.org (1996)

New

"SOCIAL ACTIVISM USING NEW MEDIA: THE REVOLUTION WILL BE DIGITIZED"

is a CD-ROM that is being developed by a collective and the University of Texas, Austin at the Act Lab. It is about the Zapatistas struggle in Chiapas.

"SOUND AND VISIONS" BY ANNA COUEY.

Anna Couey (couey@well.com) is an artist who works with computer networks as a medium for engendering new cultural and social constructs. Her work is predicated on the conception of communication structures as organic sculpture; and an aesthetic of use and action.

"SANGRE BOLIVIANA" BY LUCIA GROSSBERGER-MORALES

is a bilingual CD-ROM that explores being an immigrant as well as an Internet site on Artswire which let you express your own thoughts about immigration, what it means to have to learn a new language, and returning to your home land. Contact:
Lucia Grossberger-Morales, 510-841-4072;
lllucia@well.com

News of Members

Corinne Whitaker's The January 19 cover of **Science**, "Scanning superconducting quantum interface device microscope image of the magnetic field trapped in thin-film rings of a thallium-based cuprate high-temperature superconductor...." (whew!) was by **Clifford Pickover**.

Paul Brown has been appointed Adjunct Professor of Communication Design at the Academy of the Arts, Queensland University of Technology. He will establish a new BA Communication Design degree which takes its first students in February 1996. He edits the online art 'zine - **FineArt Forum**. Its Web site:
http://www.msstate.edu/Fineart_Online/home.html

Eduardo Kac was the recipient of a 1995 Shearwater Holography Award for $10,000 for his 12-year development of Holopoetry. Kac also one from the Kentucky Arts Council for his work in computer art. In 1996 he will be showing two new commissioned pieces: one at the "Out of Bounds" exhibition, organized by Nexus Contemporary Art and the Atlanta Committee for the Olympic Games; the other at the Siggraph Art Show in New Orleans. Both pieces will link physical spaces to the Internet. For more information about Eduardo Kac's work, please see his web site:
http://www.uky.edu/FineArts/Art/kac/kachome.html

YLEM ERRATA

(2)

THAT THE FOLLOING ERRORS APPEARED IN THE JANUARY ISSUE ON AUSTRALIAN ART:

1. Page 3: **Techno Digesto Fetishism**. One of the accompanying images was shown, out of context, on page 10, without a backwards reference to the feature.
2: **Cut Wet**, by Linda Dement , page11 was shown to its significant disadvantage and with incorrect credits.
3: On page 10 the **Shaolin Wooden Men** feature was not differentiated from two unrelated images on the same page (**Popa and VNS Matrix**)
4: The image credits for **Poster**, a major, commissioned piece by VNS Matrix on page10 were incomplete.
5: The Interfaces and Issues feature by Mike Leggett was run without the three accomanying illustrative images.
6: The three images by Margaret Turner were used without the accompanying integrated and descriptive essay. The image credits for several of these images were incomplete. Margaret Turner is a New Zealand (resident in Australia) artist and not an Australian
7: The ANAT article on page12 had Paul Brown and details of FineArt Forum appended to it and could misrepresent this organisation, which is not affiliated with FineArt Forum.
8: The title of the editorial was run into the body of the first sentence which rendered it grammatically incorrect.
For more on Australian computer art, subscribers to FineArts Forum, an online journal edited by Paul Brown may look forward to an article by leading Australian theorist and commentator, Ken Wark, and possibly others such as Warren Burt, John Conomos.
Finally, the correct email address for Robert Stanley, who wrote a letter to the editor on page 5, is: rstanley@oakton.edu.

With art and music programs always under attack in K-12 schools when budgets are tight, it is encouraging to know that there are still supporters and contributors to arts education. The Los Angeles County High School for the Arts (LACHSA) is fortunate to exist through the support of L.A. County and several generous private contributors such as the Henry Mancini Endowment, Art Center College of Design, Sony Entertainment, Wells Fargo, Gene Autry Museum, Caroline Ahmanson, and the Times Mirror Foundation to mention a few.

As a faculty member for LACHSA, my experiences may be different from those encountered in a traditional secondary school. The LACHSA 'campus' is located entirely on the campus of California State University, Los Angeles. The high school has no special buildings. Their classes are taught in university classrooms all over the campus, taking advantage of university facilities that could never be affordable on a secondary campus. Academic subjects are taught in the morning, and the arts programs in the afternoon. It is a long day for these dedicated students (8:00 am - 4:00 pm). The arts programs include Visual Arts, Music, Theatre Arts, and Dance. LACHSA's student body is comprised of 10th, 11th, and 12th grade stu-dents who have (or would have) attended any traditional high school within Los Angeles County. Students are accepted on the basis of artistic merit through portfolio review (visual arts) or performance auditions (music, theatre arts, dance). Students must also have passing grades of C or better in all academic subjects prior to admission. Of note, LACHSA has been awarded the California Distinguished School award for academic excellence.

In addition to academic subjects, each student is enrolled in five, 3-hour arts courses (one each day). Visual arts subjects include painting, drawing, design, art history, computer graphics, photography, printmaking, sculpture, ceramics, portfolio, art criticism, and nontraditional media. Students can develop cooperative projects across course lines as well as across the arts disciplines with music, theatre arts (which includes video production), and dance. Students can enroll in courses for 1 - 3 years, allowing them advanced education in areas of particular interest and ability.

The computer graphics classes are taught in the University Art Department's two computer graphics labs on 18 Power Mac 7100s as well as color and B&W scanners, SyQuest drives, and color and B&W printers. Software includes Photoshop, Infini-D, Painter, Kai's Power Tools, MacroMind Director, and Macro Model. The production lab includes a Sony laserdisc player/recorder and a Sony 3/4" editing platform for animation production and a Quantel Paintbox.

Because of the environment, dreams come true for LACHSA students. They are offered a curriculum that gives them university as well as high school credits. A student can graduate with a LACHSA high school diploma and a Cal State L.A. transcript with up to two years of university credits. This is possible because many courses have been articulated by the University as being equivalent in content to corresponding university courses.

③

Los Angeles County High School for the Arts

Jackie White

Computer Graphics

Instructor

jwhite@calstatela.edu

This is due, in part, because many of the LACHSA faculty are also Cal State L.A. faculty.

The Computer Graphics curriculum includes technical terminology and identification, computer graphics history, uses of computer graphics (design, film/video/TV, fine art, science, engineering, etc.), aesthetic qualities and design elements (repetition of forms, randomness, variable viewpoints, color changes/mixing, etc.), application of 2D and 3D imagery and writing assignments critiquing films including computer graphics as well as animation shorts. Two-dimensional project assignments familiarize the students with the software as well as guide

them through the application of design principles. Three-dimensional assignments advance them through object modeling and utilization of space using coordinates in preparation for animation instruction. Those students who do not pursue animation are required to further develop their software skills and construct lightboxes using transparency film for their images. All students are required to

quality and commitment of these students.

There is great number of institutions that offer programs and courses in computer art graphics but it is difficult to find Art Education departments there. The prospective art teachers and classroom teachers should learn to include computer art graphics into visual arts curriculum, and then to disseminate application

ments. Each teacher should be given a chance to realize own ideas in implementing computer art graphics program, not confining the students to acquiring the technical basics only. The personal style and insight of the computer art teacher may specify and preserve the artistic climate of the program.
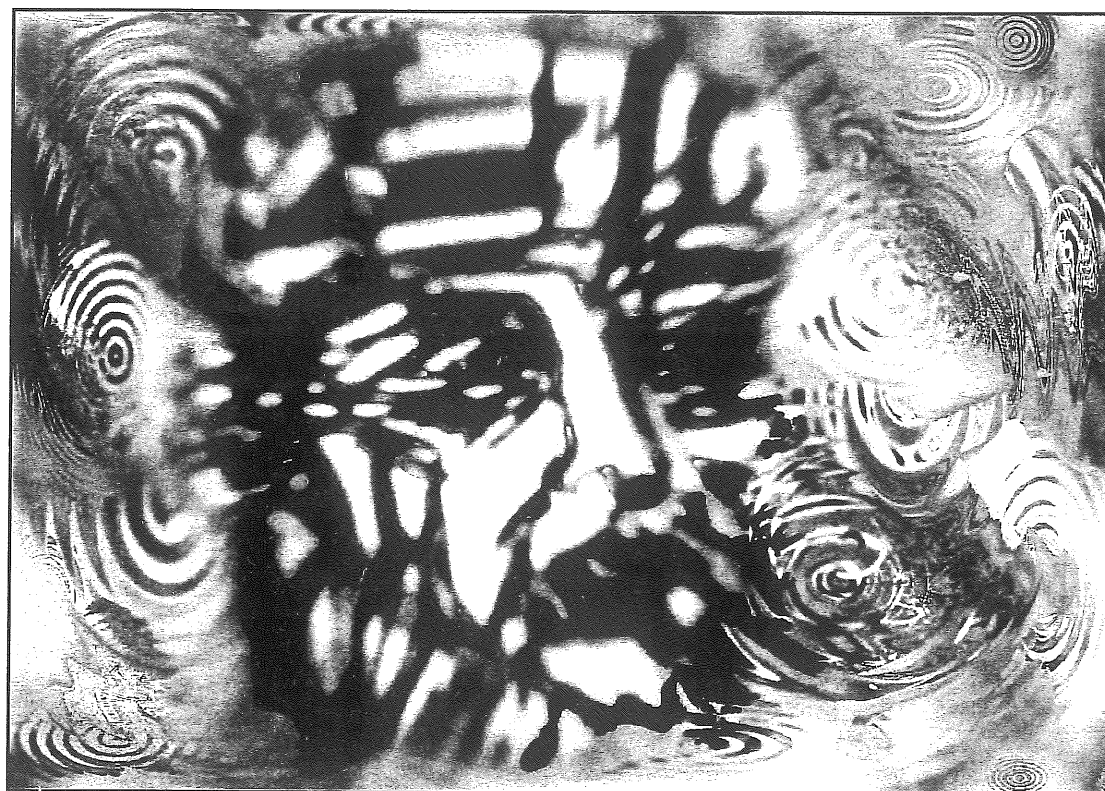
The potential of the computer in the evolution of modes of

new solutions. For this reason, I try to encourage the students to attack aesthetic issues before they familiarize themselves with all tools, and to create art graphics from the very beginning, to survive the technological impact.

When discussing a common body of knowledge and skills and various application areas; I did not find a Fine Art applicattions such as art drawing and painting. I believe that the emphasis should be placed on teaching future artist how to create a program, not to be depending on a collaboration with the programmer, or how to use the devices and software, that were made for the needs of the industry, for making its unique application to art.

Several reasons make that computer art must be perceived as a necessary part of education. ④ Learning science through creating art is an active process. If we draw inspiration from science and introduce some artistic problem to solve it with the computer, we may expect the development of creativity and improvement in spatial abilities of the students. Learning through art activities is pleasant, relaxing, un-inhibited and joyful. When students create art inspired by a science problem, they are learning without knowing of it, and acquire some ground for further retaining knowledge. Computer art activities create favorable environment for familiarizing the students with computer technology and equipment.

by Jackie White

enter the annual SIGGRAPH (ACM's Special Interest Group in Computer Graphics) Student Poster and Animation Competition and Exhibition (SPACE). Historically, entries for this competitions have been predominantly from collegees and univesities, with LACHSA students being the only high school level entries. The work for SPACE is selected through blind jury and we are fortunate each year in having LACHSA student work chosen; a testimony to the

of computer graphics to other subject areas. Teachers who use PCs in the schools should be familiarized with some specific issues concerning teaching and producing art simultaneously, focused on the use and exploration of graphic software, knowledge how to win a grant and develop a computer laboratory in the school, the ways of using graphic software for creating artwork, and of the integration of art and science topics in computer graphics assign-

artistic expression. This is related to the question whether computer graphics should be taught in a separate course or integrated into creative process. I have witnessed several times a creation of suprisingly good works by the students unexperienced in computer graphics. Maybe, the emotion coming from encountering a new medium was not suppressed by frustration. I strongly believe in lucky mistakes that help the artist to be open to

From 1965 to 1968 while working on my doctorate at Penn State, I was introduced to the IBM 360's, one of the first computers available for non-government purposes, as a tool for statistical analysis. In the environmentally controlled temple of the computer center, the boxes of programs and data on punch cards were reverently presented to white coated attendants who ministered to the refrigerator sized computers. In the middle of the night, the turnaround was faster, and since the programs rarely ran correctly the first time, the debugging process could be accomplished in hours instead of days. The algorithmically produced art was of little interest to me, but the potential of computer itself was addictive.

At Virginia Commonwealth University from 1968 to 1973 I continued to use the computer for writing. We could call a hot line, dic-

knowledge of drawing/painting programs, image manipulation, desktop publishing, two dimensional animation and video and a conceptual introduction to solid modeling. Those few of us who were obsessive kept long hours and appeared in the lab on snow days to "play". During the Amiga years, my personal machine was an Amiga 2000 which emulated both the Mac and the IBM with Amax and TARGA boards.

The exponential growth in the use of computers during the past decade has exceeded anyones wildest expectations. Faculty are realizing the need to meet the increasing needs of students and to familiarize themselves with digital media, and by their request , I am teaching the third semester of faculty classes. What was initially viewed as an insane career choice now seems to have been visionary.

I continue to be challenged by the power and versatility of this mega tool which is my primary

Computer Arts Learning
Center

⑤

tate our papers and presentations over the phone and within a week, get back hard copy for correcting.

In 1973 I came to Massachusetts College of Art in Boston where there was no institutional computer, but in my role at Dean of Graduate and Continuing Education we offered one of the first computer courses. With one Apple for 20 students it was considerably more conceptual than practical. Later, as Vice-President of Administration and Finance, I used Visiplot and Visitrend to computerize the college with a Prime mainframe.

In imaging I went from Dazzle Draw on the Apple II to the short-lived Mindset with Lumina (for $1000 total). When the AT&T 6300 appeared with the TARGA board I got one of the first units with a Xeroxed manual for the TIPS software and a JVC camera for input. I was totally hooked. After ten years in administration, I helped to set up an academically based Computer Arts Learning Center and returned to full time teaching in the center. We began with Amiga 500's because of their price and functionality. In one semester, students could get a working

creative medium, repository of vital information and link to ideas and people. As a digital artist who outputs bit-mapped images to paper and canvas, the computer is a tool/ medium that I will never completely master, always challenging me to grow and change. May it help us all to learn how to learn and to face the future with anticipation that the best is yet to come.

DOROTHY SIMPSON
KRAUSE
DotKrause@aol.com

by Dorothy Krause

Some calendar items reprinted from Art Calendar (the monthly marketing and career management journal for artists, PO Box 199, Upper Fairmount, MD 21867. Subscriptions $32/yr.), Artweek, and FineArts Forum Online (paul_brown@siggraph.org). We cannot verify all information sent to us. Readers, inform us of incorrect or false information, please.

All events and exhibits are in the San Francisco Bay Area except where noted. Is your event or exhibit listed here? Send to Ylem Editor, 967 Moreno, Palo Alto, CA 94303

Sometimes listings at the bottom of one column will flow to the top of the following right hand column. We do this to maximize the total number of listings per page.

THROUGH , 7 PM
EXPLORING FOR EXTRATERRESTRIALS"!
Talk by Seth Shostak, Public Programs Scientist, SETI Institute, Mountain View."
The Tech Museum of Innovation, 145 W. San Carlos St., San Jose, CA 95113; 408-279-7150; fax -7167

MARCH 8—14
PANDMONIUM FESTIVAL (LONDON)
London Festival of Moving Images: A new, international Festival will showcase the best in recent artists film, video and new media. Gallery Installations remain on exhibition until April 21. Includes a retrospective dedicated to the work of the seminal figure in video art, Nam June Paik. Five large-scale London Electronic Arts commissions to young British artists will be exhibited, and much more.
Contact: Karen Dowell, Festival Organizer, Pandmonium Festival, 5-7 Buck Street, London NW1 8NJ; Tel: 0171 424 0411; Fax: 0171 267 6078; enquiries@pandaem.demon.co.uk

MARCH 15, 8 PM
CIRCUT MUSICS
"robi" presents a concert of interactive, acoustic and tape-based work by Mills students.
Mills College, 5000 MacArthur Blvd., Oakland, CA 94613; 510-430-2296

MARCH 16
3-D VIRTUAL REALITY WORKSHOP
Create stunning 3-D virtual worlds. $25/nonmember, $20/member.
The Tech Museum of Innovation, 145 W. San Carlos St., San Jose, CA 95113; 408-279-7150; fax -7167; http://www.thetech.org

MARCH 27—30
CONFERENCE ON COMPUTERS, FREEDOM AND PRIVACY (CAMBRIDGE, MA)
Personal privacy is at risk. The same technologies used to combat new cybercrimes can threaten our freedoms. The lack of international borders in cyberspace raises opportunities and problems. CFP offers a neutral ground where people from widely different backgrounds (hackers, folks and snoops) can learn from each other. Of interest to artists: Plenary sessions, one on copyright; another called "We Know Where You Will Live" with 4 sci-fi writers, including Ylem author Bruce Sterling. Held at the Cambridge Hyatt Regency. Registration $500.
Conference, c/o MIT Conference Services Office, MIT 7-111; 77 Massachusetts Ave., Cambridge, MA 02139-4307; fax 617-253-7002; online at http://web.mit.edu/cfp96.

MARCH 28
OPEN SCREENS
Features academy award winning artist Zbigniew Rybczynski plus a mix of film, video and digital productions (courtesy Voyager). Show Your Stuff! Sign up in advance for each show. No charge for artists to show. To learn future Open Screens dates and locations, formats to submit, contact:

Gulture Enterprises at: 415-485-2575 vox, 415-331-8387 fax, or email gulture@nbn.com. This event is at: King Street Garage, located at 174 King St. (between 3rd &4th) San Francisco.

MARCH 29, 8 PM
ERIC MCLUHAN
Talk by Marshall McLuhan's son, who founded the McLuhan Institute for the Study of Culture and Communication. Tickets: $10.
SFSU Downtown Center, 425 Market St. at Fremont, 2nd fl.; SF; 415-904-7740

APRIL 3, 7 PM
EXPLORING THE UNIVERSE WITH THE HUBBLE
Talk by Ray Villard, Space Telescope Science Institute, Johns Hopkins University, Baltimore, MD.
The Tech Museum of Innovation, 145 W. San Carlos St., San Jose, CA 95113; 408-279-7150; fax -7167

APRIL 12, 8 PM
IKUE MORI PLUS CENTER FOR CONTEMPORARY MUSIC
A SoundCulture 96 Festival of Sound Art event featuring Ikue Mori, known for her innovative work with multiple drum-machines, and members of CCM.
Mills College, 5000 MacArthur Blvd., Oakland, CA 94613; 510-430-2296

MAY 3, 8 PM
MARK PESCE
A lecture by Pesce, co-founder of VRML (Virtual Reality Modeling Language).
SFSU Downtown Center, 425 Market St. at Fremont, 2nd fl.; SF; 415-904-7740

MAY 7—10
CONFERENCE ON EMERGING TECHNOLOGIES AND APPLICATIONS IN COMMUNICATIONS (ETACOM-96) (PORTLAND, OREGON)
Workshops, tutorials, exhibits at all levels in: ATM, wireless, multimedia, internet, client/server.
etaCOM-96, c/o American Show Management, 9782 S.W. Nimbus Ave., Beaverton, OR 97008; rosy@sequent.com

AUGUST 4—9
SIGGRAPH 96 (NEW ORLEANS, LA)
The big show of the year for computer graphics technology.
Request a brochure from http://www.siggraph.org/conferences/siggraph96/cfp/ftp://ftp.siggraph.org/conferences/siggraph96/cfpgopher://gopher.siggraph.org/Conferences/SIGGRAPH96. Call for participation; 312-321-6830; fax -6876 ⑥

SEPTEMBER 16—20
ISEA96 (ROTTERDAM, THE NETHERLANDS)
The Seventh International Symposium on Electronic Art: An academic symposium, consisting of paper and panel sessions, poster sessions, roundtables, and institutional presentations, mainly juried; preceded by workshops and tutorials; accompanied by concerts, performances, electronic theater, an exhibition, publications, and public events. Includes Dutch Electronic Art Festival (DEAF), a curated exhibition, accompanied by a symposium, performances, and special events.
ISEA96, PO Box 8656, 3009 AR Rotterdam, The Netherlands; tel 31-10-213 3003; fax 31-10-213 4190; isea96@hro.nl

THROUGH MARCH 3

MICHAEL NAIMARK: BE NOW HERE

Angkor Wat, Dubrovnik, Timbuktu, and the Old City of Jerusalem were each recorded 3 times in one day. The images are projected onto a large screen in a 60-degree panorama, and by pushing a button viewers can move among the different sites and times of day. With the aid of 3D glasses, the audience experiences the global sites in stereoscopic video and stereophonic audio.
Center for the Arts, Yerba Buena Gardens, 701 Mission St., San Francisco, CA 94103-3138;
http://www.hia.com/hia/yerbabuena

MARCH 3 - JUNE 2

THE 39 STEPS

Multimedia installation by John Sanborn. The 39 Steps combines video, computers and storytelling in a new form of narrative, one that inspires alternative ways of thinking about how we think and remember. It experiments with the nonlinear potential made possible by new media.
The Exploratorium, 3601 Lyon St., San Francisco, CA 94123; 415-563-7337; fax 561-0307; pubinfo@exploratorium.edu

MARCH 5 — JUNE 2

FIREORGAN BY TRIMPIN

Sounds of the FireOrgan are created acoustically by the thermodynamics of flame, air and length of tube. The FireOrgan also uses the latest digital technology to activate the flames, making them responsive to the presence of visitors. Trimpin's installation at the Exploratorium is a part of SoundCulture 96. In April 1996, San Francisco hosts the third transatlantic festival of contemporary sound practices.
The Exploratorium, 3601 Lyon St., San Francisco, CA 94123; 415-563-7337; fax 561-0307; http://www.exploratorium.edu

THROUGH MARCH 7

MATHEMATICS IN STONE AND BRONZE (TEMPE, ARIZONA)

By Helaman Ferguson. In Computing Commons Gallery.
Arizona State University, Tempe, AZ 85287-0101

MARCH 8 — APRIL 27

THREE ZONES PLUS ONE

A 2-story installation by Turkish artist Sarkis..
Capp Street Project, 525 2nd St., San Francisco, CA 94107; 415-495-7101; fax -7059

THROUGH MARCH 13

BREATHING SKY

An array of stones and nozzles "breathes" fog that interacts with air currents passing overhead, making the dynamics of the wind visible as the air moves around the surrounding buildings.
Center for the Arts, Yerba Buena Gardens, 701 Mission St., San Francisco, CA 94103-3138; yerbabunea@aol.com

THROUGH MARCH 15

DEUS EX MACHINA (POMONA, CA)

The digital exhibition,"Deus Ex Machina" (i.e., "god from a machine," or a character or device suddenly introduced to change the course of events) includes Ylem Member Michael Wright.
California State Polytechnic University, Pomona

THROUGH APRIL 12

FAMILY VALUES (CHICAGO)

Ylem artist Joan Truckenbrod's interactive installation shows a working class living room. In it, her multimedia piece is disguised as an old TV. She critiques the lack of political, social, and economic support for families and children in this country, a lack that the media sweep under the rug. Gallery talk on March 6 at 7 pm.
ILLINOIS ART GALLERY, 100 WEST RANDOLPH, CHICAGO, IL.

THROUGH APRIL 17

HEARTWORK: CREATING SOMETHING TOGETHER

Presents Art resulting from artists working with a community.
Euphrat Museum of Art, De Anza College, Cupertino, CA 95014; 408-864-8836

APRIL 26—30

A SOUND INSTALLATION BY "ROBI"

An interactive sound environment with unique instruments for all to play.
Mills College, 5000 MacArthur Blvd., Oakland, CA 94613; 510-430-2296

ONGOING

"BITS AND PIECES: INSIDE THE COMPUTER"

New exhibit explores the complex inner workings of today's computers. THE TECH MUSEUM OF INNOVATION, 145 W. SAN CARLOS ST., SAN JOSE, CA 95113; 408-279-7150; FAX -7167; http://www.thetech.org

MARCH 1

ARTS FESTIVAL OF ATLANTA

Open call for 1997. "We are seeking projects with potential for development for future festivals. ... We are especially interested in projects which encourage audience participation in creative processes."
Arts Festival of Atlanta, 999 Peachtree St., NE, #140, Atlanta, GA 30309-3964; 404-885-1125; fax 876-1791

MARCH 1

INTERNATIONAL FILM & VIDEO FESTIVAL

Work produced or released in the 18 months before 3/1/96. All subject categories; also numerous production technique categories.
International Film & Video Festival, 841 N. Addison Ave., Elmhurst, IL 60126-1291; 708-834-7773; fax -5565

MARCH 1

"MOVIES ON A SHOESTRING" FILM FESTIVAL

Films and videos in NTSC format, max 40 min., $20/entry, up to 2.
MOVIES ON A SHOESTRING, PO BOX 17746, ROCHESTER, NY 14617; 716-288-5607; FAX 336-2929

DEADLINE MARCH 8

LATENT IMAGE JOURNAL OF PHOTOGRAPHY

National Competition. "All types of photography." Max. image 11"x14", "mounted and unmounted work should be on 11 X 20" white boards." Published in b&w in the Journal, plus exhibitions in the Level 3 Gallery, Sam Houston State U. SASE.
Sam Houston Photographic Society, PO Box 2299, Huntsville, TX 77341; 409-294-1481

DEADLINE MARCH 15

AMERICAN MEDIA AND CULTURE

Open to U.S. artists. All media. Show in autumn. SASE.
Student Center Art Gallery, San Francisco State University, 1650 Holloway Ave., #B-134, San Francisco, CA 94132; 415-338-2580; fax -1738

DEADLINE MARCH 15

NEW YORK '96

"Contemporary experimental and innovative work in all media" created in last 2 years. $30/1-3 slides. Show June 7–July 20. 30% commission, insurance. SASE to:
Artspace, 70 Audubon St., New Haven, CT 06510; 203-772-2377

DEADLINE MARCH 21

6TH INTERNATIONAL ANIMATION FESTIVAL

Hiroshima '96 Festival, Aug. 22–26. "Frame by frame" work incl. computer graphics animation; max. 30 min., completed after 4/1/94. No entry fee. Cash awards.
Hiroshima '96 Festival Office, 4-17, Kako-machi, Naka-ku, Hiroshima 730, Japan; tel #81-82-245-0245; fax -0246

6TH INTERNATIONAL ANIMATION FESTIVAL

"Frame by frame" work incl. computer graphics animation; 16 or 35mm or 3/4" video; max. 30 minutes; completed after 4/1/94. No entry fee. Cash awards.
Hiroshima '96 Festival Office, 4-17, Kako-machi, Naka-ku, Hiroshima 730, Japan; tel #81-82-245-0245; fax #81-82-245-0246

ONE THREE NINE GALLERIES

New, experimental, fringe, controversial, or under-represented work sought. All visual media; also theatre, performance. No fees; send proposals, supporting materials, SASE.
One Three Nine Galleries, c/o Raymond Canavan, 21 Crescent Ave., Riverside, RI 02915; 401-437-9938

3RD ANNUAL JEWISH VIDEO COMPETITION

Open to all. Video & interactive media. Awards. Send SASE.
Video Competition, Judah L. Magnes Museum, 2911 Russell St., Berkeley, CA 94705; wchayes@aol.com

BRIDGES: A COLLABORATION PROJECT

All genres are welcome: installation, performance, painting, sculpture, photography, video, others. Proposals should include a brief 1-page resume, slides (no more than a sheet of 20) or documentation of current and/or previous work, and a typed statement of intent explaining the nature of the collaboration. Please note video documentation should be no longer than 5 min. or cued to a selected 5-min. segment.
Artists Committee—"Bridges," c/o Walter McBean, Gallery, San Francisco Art Institute, 800 Chestnut St., San Francisco, CA 94133

PUSH THE ENVELOPE

"Art created with the dual objective of being both art and a package. If it can get here, we will display it." Show May 3–25. No fees, no jury, no returns.
"Push the Envelope," Kansas City Artists Coalition, 201 Wyandotte, Kansas City, MO 64105; 816-421-5222

THE 2ND FIRST ANNUAL CACOPHONY DRIVE-IN MOVIE FESTIVAL

All works must be original and less than 13 minutes in length. Longer Burning Man movies may be eligible. All entries must be transferred to VHS (stereo sound OK) or 16mm. No tapes without SAS mailer will be returned. You will be notified by mail—enclose your name and address. Artists selected get free admission to festival, prizes, and best entries get sent, with permission, to programmers at major broadcast venues, including Bravo, BBC and MTV London, for possible broadcast. (Please include $10.00 entry fee in check/money order to "Film Festival") Submit to:
Shelby Toland, PO Box 881911, San Francisco, CA 94188

THE FOURTH ANNUAL NEW YORK DIGITAL SALON

Seeking computer animations, catalog essays, gallery artworks and network events for next fall's event. No entry fee. To enter, send a description of your work and artist's statement, along with slides, videotape, essays on paper and disk, and/or CD-ROM to:
Timothy Binkley, Chair, New York Digital Salon, School of Visual Arts, 209 E. 23rd St., New York, NY 10010; for further details: 212-592-2535; salon@sva.edu; http.www.sva.edu/salon/info.html

DEAD-ARTIST DESERT TRAILER-PARK

Located in the American Southwest Desert. An isolated derelict trailer-park which is being transformed without the interference of cultural bureaucrats into a working resource for creative pursuits. Applicants are given written permission to abide there. Usually recipients create some structural and creative contribution to the park during their stay. Applicants selected by a questionnaire, delivered and returned by email. The current residents of the Park use the responses to select new visitors.
bbrace@netcom.com

ITVS

Proposals accepted until about June. Open to U.S. independents with "programs that involve risk, issues, and points of view not usually seen on public TV."
Independent Television Service, 190 5th St. E., #200, St. Paul, MN 55101

ONLINE GALLERY NEEDS CURATOR

FineArt Forum is looking for a Curator for the online Gallery. Involves putting together monthly exhibition (or bimonthly) and maintaining the "permanent collection." Work closely with designer for innovative html look. Need knowledge of art and tech scene. Also, features, reviews welcome.
Paul Brown, 44 Ruth Street, Highgate Hill QLD 4101, Australia +61 7 3844 1486 voice (+fax/data). email: paul_brown@siggraph.org, Editor, FineArt Forum, http://www.gu.edu.au/gart/Fineart_Online/home.html http://www.msstate.edu/Fineart_Online/home.html

THAW 96

A Festival of Film, Video and Digital Media to be held in April, 1996. Intends to acknowledge creative and artistic expressions of the motion image. No restrictions based upon content, experimentation encouraged!
University of Iowa, THAW 96, c/o Intermedia & Video Art, 6 International Center, Iowa City, IA 52242; 319-354-0430; thaw96@uiowa.edu; http://www.uiowa.edu/~interart

Needs/Offerings

ART & SCIENCE COLLABORATIONS, INC.

ASCI is devoted to developing services, information networks and opportunities for artists working with or inspired by science and technology. Membership is open to anyone interested in the field of art & technology. Student/affiliates: $20/year; full membership: $30/year.
Art & Science Collaborations, Inc., PO Box 358, Staten Island, NY 10301

(8)

ARTISTS USING WATER TO MAKE MUSIC

Museum exhibit planning and design firm is creating a database of artists who use water to make music for a planned exhibit in a new science center in Wichita, KS. Send or fax materials.
Gyroscope, 11045 Broadway, Oakland, CA 94611; fax 510-450-7099

ARTSPEAKS

An on-line link to art collectors all over the world. On the new Microsoft Network, IBM's Global Mail, and Time/Warner's Dreamshop
http://www.artspeaks.com; 1-800-222-0402

COMPUTER RECYCLING CENTER, INC.

Repairs broken and out-of-date computer equipment and puts them in the hands of schoolchildren or volunteers in nonprofit organizations.

Computer Recycling, 1245 Terra Bella Ave., Mountain View, CA; 415-428-3700

GRADUATE MEDIA ARTS AND DESIGN PROGRAM (THE NETHERLANDS)

SCAN, Post Graduate Program in Computer Graphics and New Media awarding a master's degree. Two-year course, partly design-oriented, partly art-oriented. Small institute (10 students).

Info: http://www.media-gn.nl akke@media-gn.nl; or write:SCANDhr. Jules van de Vijver, director Hoendiepskade 23 A9718 BG Groningen,The Netherlands

⑨ DEVELOPMENT ASSOCIATE SOUGHT

Yerba Buena Gardens Studio for Technology & the Arts, needs someone to manage database and membership relations, write grants and raise money. Strong writing skills, detail-oriented person needed. Acquaintance with fundraising databases desirable. $24,000-26,000 per year. Apply to:

Director of Development, YBG Studio for Technology & the Arts, 1 Federal St., San Francisco, CA 94107

HUMANITY WALL PROJECT HELP NEEDED

Telecommunications expert collaborator needed in project by Robert Mykland linking people in 50 cities across 50 national boundaries. These 50 walls are three meters high and 10m wide and provide a window-like direct video and sound link with the other city. People can talk, play chess, fall in love, or whatever, for a world in joyous relationship.

mykland@netcom.com

ART • TEC

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Guy Marsden, 1027 41st Ave., Studio 3, Oakland, CA 94601; 510-536-1472; fax -1435; tekart@well.com.

INTER COMMUNICATION CENTER

On the Web—the Museum inside the Network. This group plans a museum of high-tech art supported by Nippon Telephone and Telegraph (NTT) to open in 1997.

NTT, Project Intercommunication Center (ICC), Marukin Bancho Bldg., eF, 6-28 Rokubancho, Chiyoda-ku, Tokyo 102, Japan; tel +81 3 3288 1121; fax +81 3 5213 8181

METAMAN

The Merging of Humans and Machines into a New Global Superorganism. The author, Gregory Stock, is versed in biophysics, business, bioethics, banking, developmental biology, lasers and computers.

Simon & Schuster 1993; illus.; $24 plus shipping from The Futurist Bookstore of the World Future Society, 7910 Woodmont Ave., #450, Bethesda, MD 20814; 800-989-8274; fax 301-951-0394

NYC ACM/SIGGRAPH MEMBERSHIP

$30 for regular membership; $55 for 2 years; full-time students $20. Make check payable to: NYC ACM/SIGGRAPH.

Mail to: V. Castleman, 60 Gramercy Park, $9A, New York, NY 10010; for info on ACM, call 212-626-0500

PROCEEDINGS OF ISEA95 MONTREAL

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ISEA 95 , 307, Sainte-Catherine West, # 310 Montreal (QC), Canada H2X 2A3 Telephone : (514) 990-0229 Fax : (514) 842-3795 Email : isea95@er.uqam.ca

ROBOT COLLABORATORS NEEDED

Garnet Hertz is currently working on a web-interfaced mobile 'robot' - a device that can move around and act in a real, physical space via a person on the Web. Almost complete, it needs individuals who are familiar with realtime-Web video, and data-compression options for the video-transfer system.

Email garnet@the.link.ca go to Website at: http://www.link.ca/~garnet

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THE EXPERIMENTAL STUDIO ON INTERNET OF THE CICV CENTRE PIERRE SCHAEFFER

The CICV is an experimental research laboratory which provides new technology in image, sound and communication for artists and researchers and their projects: films, installations, performances, exhibits, publications

CICV Centre Pierre Schaeffer, direction: Isabelle Truchot, Pierre Bongiovanni, BP5. 25310 Hérimoncourt, tel (33) 81 30 90 30; fax (33) 81 30 95 25; cicv11@calvanet.calva-com.fr; http://www.cicv.fr

THE QUANTUM DANCE WORKS

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http://ic.net/~denniss

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Vivid San Francisco, 510-528-1967; catinhat@well.sf.ca.us; vivid@gpu.uttcc.utoronto.ca

WOMEN IN ANIMATION/NY

New NYC animation organization seeks members to foster the concerns and advancement of women involved in all aspects of animation art. The New York chapter works in conjunction with Women in Animation/LA, a Los Angeles professional, nonprofit organization established in 1994.

For info: Women in Animation/NY, 330 W. 45th St., #9D, New York, NY 10036; samrussadm@aol.com

I teach computer graphics with an emphasis on commercial applications- so I seem to encounter some unique areas. Computers are interesting to students. Students of all ages are naturally drawn to the technology. Because of this, I find I am able to keep attentions and interests longer. Also, students who have little art training are reassured by the computer's ability to "undo" their mistakes. This helps quite a bit with the normal art/fear issue, leading to much more experimentation.

University of S.F.

I find the best way to motivate students is to take my time making sure they understand the computers and software they are required to produce work with. This way, students feel more comfortable with their "tools" and can be drawn into the process of working. (Once this happens- they usually stay on task.) I also spend several weeks on basic design, emphasising the need for "art applications" with the computers- (elements of design, principles of design, basic typography, photography, etc.) Also, assignments are very important. I generally start with small projects (day to day) and move towards a single large project that builds over time, allowing students to get totally immersed in the creative process.

The most inspiring tools in computer graphics are:
(a) Computers. It seems very important that students be allowed the best computers for the job they are undertaking, because of a lack of frustration with the tool. I realize this is very often impossible– but the better the system, the better the student. (b) Art. I mean fine art. The more students see and experience, the better they are as artists. And, if it isn't fine art, show them as many graphics as possible (advertisments, package design, billboards, video games, etc.,
etc.) I often assign projects that require students to bring in selections they make from the mainstream, ie. ads, etc.

LAUREL S.RUMMEL

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Everybody knows that schools teach children visual arts so that they can have hobbies for their leisure time and retirement; Everybody knows, because it was learned during the Great Depression, that visual arts can be taught with leftovers, scraps and found objects; Everybody knows, because it has happened so often, that there is little harm to the school curriculum if visual arts is reduced to extinction. Everybody knows these things because Everybody is an idiot.

Long Island High School

Visual Arts is the exact moral equivalent of Language Arts in that,where someone who obtains the skills to make and perceive verbally moves from illiteracy to literacy, someone who obtains the skills to make and perceive visually moves from blindness to sight. "Well, I was never any good at art, and I can see." If that is true, you are probably good at looking and not so good at seeing or you have taught yourself some of the arts of seeing critically despite your rotten education. All the lessons in the visual arts lead to seeing what is "out there" with a minimum of preconception. This is phenomenological seeing, and it accounts for all the lessons in self-expression and drawing and the formal study of perception and design that we think of as visual arts instruction. The kind of seeing that gets us through the day is not phenomenological. When we navigate through a forest we draw on our templates and schematics for trees without concerning ourselves with the trees themselves. This is an aid to navigation, but not necessarily to survival. The template is not the tree.
Phenomenological seeing demands the discard of the templates and schematics, the prejudices and emotional agendas in order to see what is actually present
to the eye beyond the camouflage of our expectations.

Certainly, the example is simplistic. The benefits of learning to read go beyond recognizing printed signs that say things like "THIN ICE," but so do the benefits of learning to see rather than merely to look at the world around you. Language skills permit the user to judge verbal arguments for their validity. The visual equivalent is as important. For a people increasingly dependent on images constructed by other people with agendas (say advertisers, politicians, Hollywood producers and so on) that critical visual equivalent is increasingly important. Hey, Everybody, guess who's teaching this stuff?

CARLETON PALMER, PH.D

owner-naea-emig@cythera.unb.ca

"A challenge for HyperGami in the future will be for us to think of ways to build additional tools to address problems specific to creating moving sculpture."

HyperGami:
A Program for Creating Paper Sculptures

by
Mike Eisenberg

For the past two years, I and Ann Nishioka (a doctoral student) have been developing a program named HyperGami. Originally, the tool began as a system primarily for decorating origami constructions; but for over a year now, we have been focusing more on the use of the system to create decorated paper mathematical models and polyhedral sculptures. HyperGami runs on all color Apple Macintosh computers with at least 14M of memory.

about this scenario. First, the user of HyperGami can create not only "standard" polyhedra (e.g., the cube or dodecahedron), but can use the system to create customized polyhedra. One can start with a simple shape—say, the cube—and then perform special operations on that shape (such as stretching, truncating vertices, "capping" faces with pyramids, and so forth) to make customized variants. Second, the system employs a rich variety of paint tools for decorating folding nets: not only standard colors and patterns, but tools available through the use of the Scheme language upon which the system is built.

This last point deserves some elaboration.

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The basic idea behind the HyperGami system is that users create three-dimensional objects (polyhedra) on the computer screen; the system then attempts to "unfold" these shapes into two-dimensional patterns known as "folding nets." The folding nets are displayed on the screen and may then be decorated by the user; after this, the nets can be printed out on a color printer and folded into the desired solid (Figure 1).
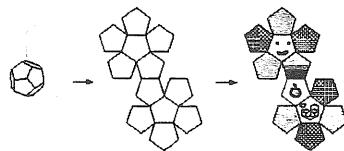

Figure 1. A solid dodecahedron (below) is unfolded to a two-dimensional "folding net" pattern (center) which may then be decorated using a variety of tools (right). The pattern at right includes hand-drawn figures, solid colors, patterns, a color gradient, and a turtle-drawn pattern (shown in progress).

A couple of points are worth emphasizing

The HyperGami system is built on an interactive language, MacScheme (available through Academic Distributing, Dewey, Arizona). The system includes both direct manipulation tools (menus, buttons, dialog boxes, etc.) and a Scheme interpreter; it provides users—both adults and children—with extraordinary flexibility and power in creating and decorating solids. Through the use of HyperGami's Scheme language users are able to create both customized polyhedra and custom decorations on folding nets. For instance, the HyperGami system includes a Logo-style programmable "turtle" that the user can employ to place complex geometric patterns within folding nets.

Our own interests lie primarily in mathematics education: rendering mathematics more enjoyable and personalized. Our hope is that a program such as HyperGami can allow children (and adults) to explore solid geometry in a way that incorporates the creative, idiosyncratic element that epitomizes artistic work.

HyperGami & Craft:
Present & Future Directions

by
Ann Nishioka

HyperGami and Paper Sculpture. To describe HyperGami's use as a sculptural tool, I will recount one of our simpler projects—namely, the "penguinhedron"
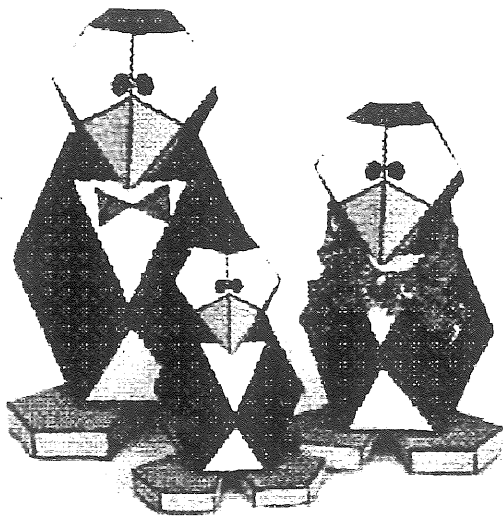

Figure 2. A family of three "penguinhedra" designed in HyperGami.

family shown in figure 2. The design of the penguin was both a "bottom-up" and "top-down" activity. The idea began in bottom-up fashion when we stumbled upon an appealing head shape during an exercise in "capping." While adding pyramids to the faces of various shapes, we noticed that the result of capping a dodecahedron was a shape that closely resembled a bird's head and beak. After using the software to experiment with colors, patterns, and facial expressions, we printed and assembled the penguin's head.
The rest of the sculpture then became a top-down design task: we had the head of the penguinhedron but now needed a body and feet. Working from pictures of

real penguins, we abstracted the general form of their bodies and decided finally that a cuboctahedron would serve as a suitable basic shape. We stretched it along one of its axes to make it a bit taller and thinner, and noticed that the triangles on the sides would suggest wings. We then employed HyperGami to design a flipper-shaped polygon which served as the template for the prismatic feet of the penguins.

HyperGami and Other Crafts. We have recently begun experimenting with HyperGami in conjunction with media other than paper. We construct polyhedral "molds" by printing and assembling various HyperGami solids from cardstock and then pouring a variety of substances into them. Once the poured substance hardens, we remove the mold. Using this technique, we've created plaster polyhedra, a cuboctahedral candle, and geometric chocolate candy. Other areas of computers and crafts in general that we would like to explore in the future include woodworking, clay sculpture, and ways of producing computer-designed glazing patterns on pottery.

Turning Paper Wheels. Still another activity has been to use HyperGami as a design tool for kinetic paper sculpture. Inspired by the work of Paul Spooner, Keith Newstead, and other artists whose works are exhibited in London's Cabaret Mechanical Theatre, we've created the first of what we hope will be a gleeful collection of paper automata. Our early examples use simple mechanisms in which a cam sitting on a horizontal (crank-operated) shaft pushes a cam follower sitting on a vertical shaft. Turning the crank then produces a bobbing motion for the figure on top of the structure, e.g., a penguin moves up and down as he wrestles with a bouncing fish. We plan to incorporate other simple mechanisms such as levers and

gears in the near future.

A challenge for HyperGami in the future will be for us to think of ways to build additional tools to address problems specific to creating moving sculpture. For example, the delicate connections between parts in moving sculpture has led us to think about building something like a "scaling tool" which could tell the user how (e.g.) to scale his cam follower to work smoothly with a given cam. Similarly, expanding HyperGami into a design tool for kinetic sculpture may well involve the integration of QuickTime movies as a means for demonstrating actual moving parts of constructions.

HyperGami as a Design Tool for Children. In addition to developing the HyperGami system as a tool for artists, we also view it as a rich educational environment for children. During the last two years we have worked with over a dozen elementary and middle-school children on a weekly basis for an average of ten weeks. Some motivated children have worked with us for as long as a year and still occasionally participate in our activities. Our "lessons" are project-oriented and primarily driven by the children. They typically pick a favorite shape or animal they would like to make and then learn to use the software to create the parts and shapes they need. The children set the pace of the meetings – eight year-olds have made simple polyhedral shapes decorated with patterns they designed; a ten-year-old created a superhero in the form of a duck, and a thirteen-year old planned and constructed a polyhedral dinosaur. In the coming year, we are planning to begin work on a collaborative environment in which children (both locally and, ideally, over the World Wide Web) will contribute their own constructions to create a three-dimensional mural of paper sculpture.

To begin with, technology has enhanced the educational process for thousands of years. When humans first began communicating through the use of symbols, technology was born. Using a stick as a writing tool, or using a computer doesn't make a difference, what you write does. The computer has allowed something greater than the simple process of writing, or scratching a symbol, it has allowed instant global communication, which is an enigma all it's own. In no time during recorded history (other than references in ancient scripts, ie., the Tower of Babel) have humans had the means to communicate globally with their fellow terranauts. As a human, the concept of a global community is thrilling.

As an educator, to expose my students to such a tool is a responsibility. When I teach a particular concept of art, I do it because I feel it's important for my student's percep-

find groups of kids coming in early to gather around the monitor. Doing 'quality' work is, in my opinion, a subjective observation of how I feel the work should look in a technical and aesthetic context. If the students are pleased with their efforts, then so am I.

Young people today see the effects of the computer all around them in culture: on TV, at the movies, when they play Nintendo, or manipulating math problems at school with antiquated Apple IIe's. But to pinpoint a couple of tools as the most inspiring, I would say those which provide the student the ability to express themselves with ease. Stamping tools, stencil tools, and ready-made graphics inspire students the most when using a graphics program at elementary levels. When I began teaching computer graphics using the program SuperPaint on a Macintosh Classic, the students rarely ventured from the pencil tool. I then graduated to a Macintosh LC and introduced

Findley Elementary School

⑬

tion of life around them, not because their going to devote their lives to art. When I share the Internet with my students, it's to expand their knowledge of their society, to actualize their potential in the world they've been born to. This knowledge/perception will enhance their work through experiences otherwise not possible without computers and networks.

The themes I use are very simple, allowing for broad interpretation by the student. Self-portraits, landscapes, and pure experimentation with the media are my favorites. Since the computer is virtually a new tool for them, I keep the subject something close to their understanding. Complexity comes from their own imagination. By computer graphics standards, the results are usually anything but aesthetic, but the process associated with the students' manipulation of the media is the focus.

Motivation is no problem in the elementary school, the students crawl over each other to get on the computer. It's not unusual to

KidPix. The students couldn't use the stamping tool enough! I finally had to limit the number of stamps they could use.

Currently I use a Mac Quadra 660AV and this year introduced Fractal Design's Dabbler and Painter programs. I feel the students are adapting to the free-natured use of these programs, but I've discovered in a very short period of time they prefer to use the stencil tool for creating shapes and coloring them. I hope introducing the students to the Internet and allowing them to exchange their artwork with students from other states and other countries will be the most inspiring tool they've ever experienced. I currently have samples of my artwork at:

http://www.geopages.com/paris/2313

BRYAN BUTCHER

Findley Elementary School

3000 Cambridge, Des

Moines, Iowa 50313

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